

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

29. (currently amended) A dry method for finishing SOI substrates, said method comprising:

providing an SOI substrate comprising a cleaved surface, said cleaved surface having a first surface roughness value;

increasing a temperature of an environment associated with said cleaved surface to about 1,000° Celsius and greater; and

contacting said cleaved surface with a hydrogen bearing environment at least when said temperature of said environment is about 1000° Celsius and greater to reduce said first surface roughness value by at least about eighty percent to a second surface roughness value, said hydrogen bearing environment including at least an HCl H₂ gas and a hydrogen gas;

whereupon the cleaved surface having the second roughness value is substantially planarized.

30. (previously presented) The method of claim 29 wherein the increasing the temperature is provided at a rate of about 10 Degrees Celsius per second and greater.

31. (previously presented) The method of claim 29 wherein said first surface roughness value is reduced by at least about ninety percent to the second roughness value.

32. (currently amended) The method of claim 29 wherein said HCl gas and said hydrogen gas are a ratio (HCl:H₂) (HCl:H₂) of about 0.001 to 30.

33. (currently amended) The method of claim 29, wherein said hydrogen gas and the HCl gas interact with said cleaved surface to reduce said surface roughness value.

34. (currently amended) The method of claim 29 wherein said first surface roughness value of said cleaved surface is reduced in a thermal processing chamber.

35. (previously presented) The method of claim 29 wherein cleaved surface is provided by a controlled cleavage process.

36. (currently amended) The method of claim 29 wherein said SOI substrate is fabricated from a donor silicon wafer.

37. (currently amended) The method of claim 29 wherein said environment is said surface is raised to a temperature of at least about 1,000° Celsius.

38. (previously presented) The method of claim 29 wherein said environment is a process chamber wherein said substrate is provided.

39. (currently amended) The method of claim 29 wherein the environment is maintained at a pressure of about 1 atmosphere atmosphere.

40. (new) The method of claim 29 wherein said SOI substrate is a wafer whereon a plurality of fabrication processes are performed to define a plurality transistors on said substantially planarized surface.

41. (new) The method of claim 29, wherein said SOI substrate is a wafer having a main surface, said main surface being planarized in its entirety by said increasing-a-temperature and contacting steps, wherein a plurality of semiconductor dice are fabricated on said planarized main surface.

42. (new) A dry method for finishing SOI wafers, said method comprising: providing an SOI wafer comprising a main surface that has been cleaved, said cleaved main surface having a first surface roughness value;

increasing a temperature of an environment associated with said cleaved main surface to about 1,000° Celsius and greater; and

contacting said cleaved main surface with a hydrogen bearing environment at least when said temperature of said environment is about 1000° Celsius and greater to reduce said first surface roughness value by at least about eighty percent to a second surface roughness value, said hydrogen bearing environment including at least an HCl gas and a hydrogen gas;

wherein the main surface is substantially planarized in its entirety to the second roughness value, the planarized main surface providing a surface whereon a plurality of semiconductor dice are defined.